

## SOMATOSENSORY ACTIVITIES

### THE BALL GAME

This is a fun, easy game that's a great introduction to balance and somatosensory learning. This kind of learning is where you learn about your world from the inside out; from sensory systems inside your body. I call it inside-out learning! Anyone can play this ball game. Participants will learn about their somatosensory system in a fun and interactive way. (The somatosensory system is made up of sense receptors inside the body that help you learn about the world around you.) You will be teaching your participants to listen to their body.

#### **Benefits »**

- ⦿ Requires participants to listen to their body and recall former learning experiences in a fun and easy activity.
- ⦿ Explores light touch, pressure, and recognizing shapes (proprioceptive learning).
- ⦿ Increases self-awareness, self appreciation, and interest in learning more.

#### **Set It Up »**

- ⦿ You'll need balls of various sizes, shapes (footballs, Wiffle balls, playground balls), textures (tennis balls, golf balls, Hacky Sacks, Wiffle balls), densities (grapefruits, baseballs, foam balls, light medicine balls), and even smells (oranges, grapefruits). Have a few items that clearly are not balls (fuzzy dice, barbell). Check out the local dollar stores for these items.
- ⦿ Keep the balls hidden; do not bring them out until participants have their eyes closed.
- ⦿ Ideally, provide enough balls for everyone to have one. Alternatively, a few volunteers can use a smaller number of various balls. The audience will enjoy watching them guess and learn.

#### **How to Do It »**

- ⦿ Participants should be seated comfortably.
- ⦿ Begin the activity with a few hand stretches:
  - Flex and extend the fingers (make a fist; make a starfish).
  - Each finger takes a bow by touching its thumb and then extending again into a starfish.
  - Play the piano with the fingers (curl fingers up and out at knuckles).
  - Do a few wrist circles.
- ⦿ Ask participants (or volunteers if there aren't enough balls for everyone) to close their eyes (or you can use blindfolds). This is a guessing game! They should keep them closed until told to open them.
- ⦿ Hand out one object to each participant.

- They will be “looking” for sensory clues with their fingers. First they will feel the texture of the ball.
- Use a light, soft touch of your fingers to learn about the texture.
  - Is it bumpy? Fuzzy? Smooth?
  - Does it have lines? Does it have any holes in it?
  - Does the texture tell you anything about the ball?
- Squeeze the ball (firm touch).
  - Is it firm or soft?
  - What about squeezing the ball? Does that tell you anything?
  - Thump it. What sound does it make?
  - What does the thump say about the ball?
- What shape is the ball?
  - Is it big? Small?
  - Does anyone have a ball that is not round?
  - How can you tell the shape without looking?
- Are there other sensory clues?
  - Does the ball have a smell?
  - Is it heavy or light?
  - If the ball is heavy, how does the body know that?
  - Do participants notice how weight is felt because it pulls on the arm muscles?



By now, people will have a pretty good idea of what object they're holding. When you call out their ball, have them raise their hand but still keep their eyes closed.

- Who has a tennis ball?
- Who has a golf ball?
- Whose ball is not actually a ball at all?
- Call out all the balls. Participants raise their hand when they hear their object named.
- Now they can open their eyes. Congratulate them on good guesses!
- Ask them how they knew all of this without sight.

They may say they just could tell, and you can discuss how that's learning from past experiences and knowledge. But probably most interesting to them will be that they used their somatic senses for light touch, firm touch, pressure, and position to learn about the shape, weight, and size of the object. They also may have been able to use smell and sounds for more clues. All of these sensory clues combined with past experience and knowledge helped them gather information about the objects.

Discuss how their body figured out the shape of their ball without sight. The answer is that kinesthetic receptors line each joint and communicate the position of the joint to the brain. If the positions of the fingers describe a round object, that's what the joint receptors tell the brain. And then we know the object we hold is round. Similarly, other somatic receptors tell us if the ball is fuzzy or smooth, firm or soft. Still others in our muscle cells tell our brains something about how much an object weighs; we feel the pull on a muscle.

### **Live It »**

Participants will better appreciate the body and all of its sensory devices. Without using vision, the body can still perceive the environment. Density, texture, position, shape, smell, and weight all provide important sensory information about the world around us. These sensory clues combine with past experience and knowledge to help the body coordinate a great deal of information from which to draw a conclusion or form a plan.